Health by Numbers

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Hospitalizations by Race and Ethnicity Rhode Island, 1990-2003

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Healthy People 2010 has committed the nation to eliminate health disparities within the American population,[1] and the Rhode Island Department of Health has adopted a similar goal for the people of the state.[2] In both instances, the goal encompasses health disparities based on characteristics such as gender, education, geography, income, disability status, etc., but the most prominent disparities have been those based on race and ethnicity.

The elimination of health disparities among racial and ethnic groups requires that we measure and monitor the health status and health risk behaviors for these groups. Specifically, we must correctly ascertain race and ethnicity in the sources of data for these measures. The Rhode Island Department of Health has since 1988 had a policy for the collection of data on race and ethnicity that covers all its major databases. In 2000, the Department revised its policy, following a major revision in federal policy on the collection of information on race and ethnicity.[3]

In this study, we present an analysis of the information on race and ethnicity collected in the statewide hospital discharge data, one of the databases used to monitor progress toward the state's health objectives for 2010. In particular, we examine the trend over time in the information reported by hospitals on race and ethnicity and the effect of the new policy on the reported information.

Methods. Acute-care general hospitals in Rhode Island have been reporting patient-level data for every patient discharged since October 1, 1989, as required by licensure regulations. As of October 1, 1998, Rhode Island's two psychiatric specialty hospitals and one inpatient rehabilitation facility began reporting patient-level data. The data reported includes the patient's demographic characteristics, among them race and ethnicity.

Over the period 1990-2003, hospitals have submitted race and ethnicity data in three different formats.

1. From the initial establishment of reporting through September 1998, race and ethnicity were combined as a single data element with these possible entries: White; Black; Asian or Pacific Islander; American Indian or Alaska Native; Hispanic; Other; Not Reported.
2. From October 1998 through March 2003 the single-item format was maintained with these categories: White Hispanic; White not Hispanic; Black Hispanic; Black not Hispanic; Asian or Pacific Islander; American Indian or Alaska Native; Hispanic; Other; Not Reported.
3. From April 2003 forward, the collection reflects the Department's revised policy, and race and ethnicity are collected as separate data items with the following categories:

   Ethnicity: Hispanic; Not Hispanic; Not Reported

   Race: White; Black; Asian; American Indian or Alaska Native; Native Hawaiian or Other Pacific Islander; Other; Not Reported

   In addition, persons may report themselves as being of more than one race.

To provide comparability over time, the latter two formats have been regrouped into the initial set of categories as closely as possible. For the second format, the two categories White Hispanic and Black Hispanic were combined to approximate Hispanic in earlier years. All other categories remained unchanged. For the third format, several combinations were necessary, as follows:

- Hispanic persons reporting their race as White, Black, Other, or Not Reported are assigned as Hispanic.
- Persons reporting more than one race are assigned as Other race.
- Persons reporting their race either as Asian or as Native Hawaiian or Other Pacific Islander are combined as Asian or Pacific Islander.
- All remaining persons are categorized by their entries in the race variable.

To produce trend data that is comparable over the full period 1990 - 2003, that analysis excludes the three specialty hospitals that began reporting in October 1998.

Results. For April through December 2003, the reported distribution of the race and ethnicity of hospital inpatients appears in Tables 1 and 2. For a substantial number of discharges, there is no usable data on the patient's ethnicity. For most of these discharges the hospital has submitted a code indicating that this data item was not collected at the time of admission (13.2% of all discharges), but for some (0.5%) the data element has been left blank. The rate of reporting is better for the race data element — race was not reported by the patient for 4.7% of discharges, and for another 0.2% the data element is blank.

Table 1. Hospital Inpatient Discharges, by Ethnicity, Rhode Island, April – December 2003

Ethnicity	Number (%)
Hispanic	6,059 (5.7%)
Not Hispanic	84,882 (80.5%)
Not Reported	13,899 (13.2%)
Missing	539 (0.5%)
Total	105,379 (100%)

During this most recent period, the data collection system allowed the patient to specify multiple races for the first time. Relatively few (0.5%) patients indicated two races, compared to the proportion in Rhode Island reporting multiple races on the 2000 Census (2.7%). This difference may be due to the fact that hospital inpatients include a disproportionate number of elderly and middle-aged persons, who are less likely to be of minority race or ethnicity and possibly less likely to identify themselves as being of multiple race. However, part of the difference may arise from the different circumstances in which the data are collected for the two data sources.

Over the period 1990-2003 the proportions of hospital inpatients reported to be of minority races or ethnicity have increased

Table 2. Hospital Inpatient Discharges, by Race, Rhode Island, April – December 2003

Race	Number (%)
One race only	
White	89,810 (85.2%)
Black	6,516 (6.2%)
Asian	1,286 (1.2%)
AIAN*	110 (0.1%)
NHOPI*	251 (0.2%)
Two races reported	540 (0.5%)
White/Black	*86*
White/Asian	*28*
*White/AIAN**	*122*
*White/NHOPI**	*108*
Black/Asian	*52*
*Black/AIAN**	*17*
*Black/NHOPI**	*32*
*Asian/AIAN**	*12*
*Asian/NHOPI**	*40*
AIAN/NHOPI**	*43*
Other	1,685 (1.6%)
Not Reported	4,929 (4.7%)
Missing	252 (0.2%)
Total	105,379 (100%)

***AIAN = American Indian or Alaska Native**
NHOPI = Native Hawaiian or Other Pacific Islander

slightly. For blacks, it has grown from 4.7% in 1990 to 5.7% in 2003. For Hispanics, it has grown slightly more rapidly, from 3.5% to 5.3%. (Figure 1) For comparison, the increases in the corresponding proportions reported in the Census data for the state between 1990 and 2000 are, for Blacks, from 3.9% to 4.5%, and for Hispanics, from 4.6% to 8.7%. Also during this period, the proportion of patients with unreported or missing data on both data elements has decreased from 4.7% to 3.3%. (Note that the data for calendar 2003 includes nine months of submissions under the new two-item format; in this format, it is possible to characterize some patients for whom one of the two items is not available, as described in the methods.)

Discussion. The collection of data on patient race and ethnicity in clinical settings such as hospitals is a process that can be frustrated by barriers ranging from discomfort on the part of the data collectors who interact with the patients, including hospital admission clerks, nurses, and physicians, to the medical condition of the patient when admitted. Recently, changes in the Department of Health policy have made the data collection process more complex for hospitals, by separating the data into two items (race and Hispanic origin) and by allowing patients to indicate multiple races. The risk of any such increase in the data collection burden is that the quality of the collected data will deteriorate, both in terms of completeness and quality.

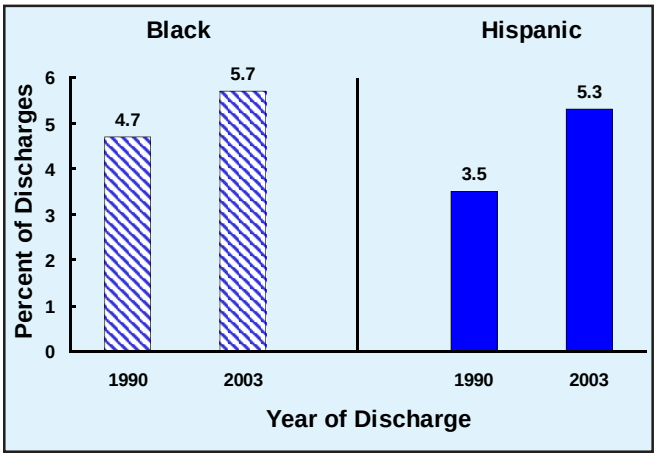

Figure 1. *Discharges of Inpatients from Acute Care General Hospitals, by Race (Black) and Ethnicity (Hispanic Origin), and by Year of Discharge, Rhode Island, 1990 and 2003.*

Despite the breadth of these changes, the aggregate information reported by the hospitals during the first nine months of the new system does not appear to have been greatly affected. This is a reassuring finding, as the data on race and ethnicity are both among the hardest items to collect accurately and completely and among the most important items for meeting the major public health goals of Healthy Rhode Islanders 2010.

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References

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